

## **LISTING OF CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-14 (Canceled)

- Claim 15 (New) A method of regulating the operating temperature of an internal combustion engine, comprising:
- circulating a cooling fluid through the internal combustion engine via a cooling pump driven by an electric motor, at least a portion of the electric motor being thermally coupled to the cooling fluid;
  - measuring a temperature of the cooling fluid; and
  - controlling the electric motor to operate inefficiently if the measured temperature of the cooling fluid is below a normal operating temperature of the internal combustion engine so that waste heat is produced within the electric motor and transferred to the cooling fluid via the thermal coupling between the electric motor and the cooling fluid, the electric motor being controlled to operate inefficiently by supplying alternating forward and reverse exciter currents to the electric motor.
- Claim 16 (New) The method of claim 15, wherein the portion of the electric motor thermally coupled to the cooling fluid includes motor windings, and the waste heat produced within the electric motor is transferred to the cooling fluid as the cooling fluid flows over the windings of the electric motor.
- Claim 17 (New) The method of claim 15, further comprising controlling the electric motor to operate the cooling pump via a cyclically controlled current.

- Claim 18 (New) A method of regulating the operating temperature of an internal combustion engine, comprising:
- circulating a cooling fluid through the internal combustion engine via a cooling pump driven by an electric motor having a saturation current limit, at least a portion of the electric motor being thermally coupled to the cooling fluid;
  - measuring a temperature of the cooling fluid; and
  - controlling the electric motor to operate inefficiently if the measured temperature of the cooling fluid is below a normal operating temperature of the internal combustion engine so that waste heat is produced within the electric motor and transferred to the cooling fluid via the thermal coupling between the electric motor and the cooling fluid, the electric motor being controlled to operate inefficiently by supplying an amount of current to the electric motor that is at least equal to the saturation current limit of the electric motor.
- Claim 19 (New) The method of claim 18, wherein the amount of current supplied to the electric motor is greater than the saturation current limit of the electric motor.
- Claim 20 (New) A method of regulating the operating temperature of an internal combustion engine, comprising:
- circulating a cooling fluid through the internal combustion engine via a cooling pump driven by an electric motor, at least a portion of the electric motor being thermally coupled to the cooling fluid;
  - measuring a temperature of the cooling fluid; and
  - controlling the electric motor to operate inefficiently if the measured temperature of the cooling fluid is below a normal operating temperature of the internal combustion engine so that waste heat is produced within the electric motor and transferred to the cooling fluid via the thermal coupling between the electric motor and the cooling fluid, the electric motor being controlled to operate

inefficiently by supplying pulse control signals having impressed ripples to the electric motor.

- Claim 21 (New) An apparatus for regulating the operating temperature of an internal combustion engine, comprising
- a cooling fluid circuit for circulating cooling fluid through the internal combustion engine;
  - a cooling fluid pump for transporting the cooling fluid through the cooling fluid circuit;
  - a temperature measuring device operable to measure a temperature of the cooling fluid;
  - an electric motor for driving the cooling fluid pump, at least a portion of the electric motor being thermally coupled to the cooling fluid; and
  - a control device for controlling the electric motor in accordance with the temperature of the cooling fluid measured by the measuring device, the control device operable to control the electric motor inefficiently if the temperature of the cooling fluid measured by the measuring device is below a normal operating temperature of the internal combustion engine so that waste heat is produced within the electric motor and transferred to the cooling fluid via the thermal coupling between the electric motor and the cooling fluid, the electric motor being controllable to operate inefficiently by supplying alternating forward and reverse exciter currents to the electric motor.
- Claim 22 (New) The apparatus of claim 21, wherein at least the portion of the electric motor that is thermally coupled to the cooling fluid forms part of the cooling fluid circuit.

- Claim 23 (New) The apparatus of claim 21, further comprising electrical components thermally coupled to the cooling fluid, the electrical components being controllable to produce additional waste heat for transfer to the cooling fluid.
- Claim 24 (New) The apparatus of claim 21, wherein the control device includes semiconductor switches thermally coupled to the cooling fluid, the switches being controllable to operate inefficiently so that additional waste heat may be produced by the switches and transferred to the cooling fluid via the thermal coupling between the switches and the cooling fluid.
- Claim 25 (New) The apparatus of claim 21, wherein the electric motor and the cooling pump form an integral part of the cooling fluid circuit through which the cooling fluid flows.